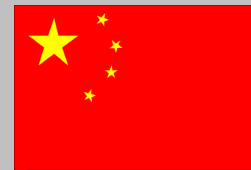


China

Debra Lew, NREL



Unelectrified Population = Approximately 65 million people

Brightness Program

- Goal is to provide electricity to 23 million rural people by 2010 with wind and PV technologies for households and villages.
- Program has begun in several provinces/regions: Gansu, Qinghai, Inner Mongolia, Tibet, and Xinjiang. In Phase 1 of the program (2000-2004), 1.8 million home systems (serving 8 million people), 2000 villages, and 200 stations will be electrified. This will reduce CO₂ emissions by 415,000 tonnes. The total investment will be about 10 billion yuan.
- State Development Planning Commission and regional commissions; Beijing Jikedian Renewable Energy Development Center. Assistance from the Netherlands, Shell, DOE/NREL, GTZ.



U.S./China Renewable Energy Forum



Inner Mongolia wind/PV household hybrid system

UNDP/GEF Capacity Building for Rapid Commercialization of Renewable Energy

- State Economic and Trade Commission, Netherlands, Australia, UN Department of Economic and Social Affairs, UNDP, CRED
- \$25 million, five-year project began in 6/99.
- Activities include capacity building (training/workshops in business, finance, hybrids); pilot projects (wind/diesel and wind/PV/diesel hybrids for islands, biogas for pig farms, bagasse cogeneration); technical assistance (resource assessment and GIS, standards and certification, wind farms); and establishment of China Renewable Energy Industries Association and Investment Opportunity Facility.

Renewable Energy Development

- Dissemination of 6.9 million small biogas digesters, 17 GW of small hydro, 15 million sqm. of solar water heaters, 13 MW of photovoltaics (PV), and 160,000 micro wind turbines.
- The draft of the Tenth Five Year Plan (2001-2005) proposes a renewables portfolio standard of 5.8%, use of renewables in the Grand Western Development Initiative, and increased deployment and development of renewable energy systems.
- Other rural renewables projects include the World Bank/GEF solar home systems/wind farm project, Asian Development Bank's wind farm/solar thermal/bagasse cogeneration project, the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) wind turbine and hybrid systems technology transfer project, and the Ministry of Agriculture's Hundred Counties Program.

Renewable energy shop in small town in Inner Mongolia



Saihantala small wind turbine test site

U.S./China Protocol for Cooperation in Energy Efficiency and Renewable Energy

- Ministry of Science and Technology and U.S. Department of Energy (DOE) signed protocol in 2/95. Components include rural energy (Ministry of Agriculture), wind (State Power), business (State Economic and Trade Commission, Center for Renewable Energy Development [CRED]), and policy and planning (State Development Planning Commission, Beijing Jikedian Center).
- Activities include pilot projects (600 Gansu PV systems, 341 Inner Mongolia wind/PV hybrids, Xiao Qingdao Island wind/diesel hybrid, 200 Tibet PV home systems); capacity building (resource assessment, hybrids, policy, life-cycle analysis); analyses (biomass assessments; business, technology and market assessments); and events (business workshops/study tours/Renewable Energy Forum)



Southeast China - Central Coast of Fujian

Nan'ao Island, China